

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-170211

(43)Date of publication of application : 26.06.1998

(51)Int.Cl. G01B 7/00  
G01D 5/244  
G01D 5/245  
G02B 7/08  
G05D 3/12

(21)Application number : 08-333178

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(22)Date of filing : 13.12.1996

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## (54) POSITION DETECTING DEVICE AND LENS POSITION CONTROLLER

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a construction which is simple and inexpensive and can be miniaturized, and can highly accurately detect a position, and moreover can carry out an initializing motion in a short time, in a position detecting device where a magnetic scale magnetized in mutually reverse polarity at fixed intervals is relatively moved to a magnetic sensor to magnetically detect the position of the magnetic scale.

**SOLUTION:** The magnetized pattern of a magnetic scale 103 is composed of a moving signal part 111 which is magnetized in mutually reverse polarity at fixed intervals P along the longitudinal direction of the above scale, and generates a periodical signal with the movement of a scale, and a reference signal part 112 for generating a signal to show the reference of the position of the magnetic scale. The reference signal part 112 is composed as a magnetized part whose magnetized width is two times as much as a magnetizing space P so as to disturb the periodicity of change in the strength distribution of a magnetic field due to the magnetization of the moving signal part 111, and plurally provided, and is composed so as to be severally different in their spaces.

